AUTODOME IP 4000 HD

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BOSCH
Invented for life

- Perfect combination of style and technology for indoor installations that require high-quality imaging in a compact and aesthetic dome housing
- Integrated 12x optical zoom with high-end imaging platform for monitoring details under typical indoor lighting conditions
- Simple installation with flexible mounting options (in-ceiling or surface mounting)
- Full ONVIF profile S and G and third party software support for easy integration with Video Management Systems (VMS)

The AUTODOME IP 4000 HD is a compact, indoor PTZ dome camera with a high-resolution 1080p25/30 (2MP) HD sensor and a powerful 12x optical zoom that allows operators to monitor wide scenes without losing any details. The camera's aesthetic design and flexible mounting options allow unobtrusive surveillance of large halls, reception areas, or waiting areas that would otherwise require multiple cameras for effective surveillance. Built on the robust imaging technology from Bosch, the camera is carefully tuned to maintain accurate coloring and to capture details of objects or faces in scenes with bright ambient lighting. The camera provides complete network-based control of all functionality including pan/tilt/zoom operation, presets, tours, alarms, and web-based configuration of all camera settings.
The camera is designed on advanced encoding and imaging technology from Bosch which allows high-resolution video streaming on the network with at least 50% less storage than any standard PTZ camera.

Functions

Superior imaging performance
Designed using Bosch's imaging platform, the AUTODOME IP 4000 HD delivers high-resolution video with flexibility to zoom in to small details.
The camera comes with three (3) pre-tuned scene modes to match various lighting conditions found in indoor scenes. Users can complete the configuration without going through multiple imaging settings.

Three (3) pre-programmed user modes
- Indoor: For indoor fluorescent lighting
- Outdoor: For outdoor scenarios where light varies through the day
- Vibrant: For enhanced contrast, sharpness, and saturation

PTZ drive and mechanism
The camera supports 256 pre-positions and two styles of Guard Tours: Preset and Record/Playback. The preset tour has capability for up to 256 pre-positions with a configurable dwell time between pre-positions and can be customized as to the order and frequency each preset is visited. The camera also provides support for two (2) recorded tours, which have a total duration of 30 minutes of movements. These are

recorded macros of an operator's movements, including pan, tilt, and zoom activities, and can be played back in a continuous manner.
Pan and tilt preset repeatability are accurate to within ±0.2 degrees to ensure that the correct scene is captured every time. The camera delivers maximum pan speed of 160 degrees per second and maximum tilt speed of 120 degrees per second. The camera is capable of manual speeds (pan and tilt) of 0.1 to 120 degrees per second. The camera provides a pan range of up to 360 degrees continuous rotation.
The camera's tilt angle is from 0° to +90°.

Intelligent Dynamic Noise Reduction reduces bandwidth and storage requirements
The camera uses Intelligent Dynamic Noise Reduction which actively analyzes the contents of a scene and reduces noise artifacts accordingly.
The low-noise image and the efficient H.264 compression technology provide clear images while reducing bandwidth and storage by up to 50% compared to other H.264 cameras. This results in reduced-bandwidth streams that still retain a high image quality and smooth motion. The camera provides the most usable image possible by cleverly optimizing the detail-to-bandwidth ratio.

Area-based encoding
Area-based encoding is another feature which reduces bandwidth. Compression parameters for up to eight user-definable regions can be set. This allows uninteresting regions to be highly compressed, leaving more bandwidth for important parts of the scene.
User can configure area-based encoding for every configured preset, allowing important parts of the scene to be encoded at high resolution and unimportant parts (such as the sky, trees in the background, etc.) to be encoded at lower quality.

Intelligent Defog
Users can configure the mode to activate automatically when the global contrast enhancement method in the camera detects fog and adds light to the video image (and then deactivates when the fog clears or the scene changes).

Advanced streaming
The camera offers advanced streaming capabilities so that you can configure the camera to take advantage of the latest network technology.
The camera is designed on the most efficient and powerful H.264 encoding platform capable of delivering high-quality HD video with very low network load. The new intelligent encoding capabilities drops the bandwidth consumption to extremely low levels if the camera detects no motion in the scene.
The camera is capable of quad streaming which allows the camera to be configured to deliver independent, configurable streams for live viewing, recording, or remote monitoring on constrained bandwidths.

Recording and storage management
A memory card (a maximum of 32GB microSDHC / 64GB microSDXC) can be used for local alarm recording or for scheduled local recording to improve the overall recording reliability. Recording management can be controlled by the Bosch Video Recording Manager (VRM), or the camera can use iSCSI targets directly without any recording software.

Alarm handling and Motion Detection
A wide range of configuration options is available for alarms signaling the camera. A built-in algorithm for detecting movement on presets can also be used for alarm signaling, or the camera can interface to an external alarm source using the built-in alarm I/O ports. In addition, a user can also schedule virtual alarms. Any of the available external alarm, motion alarm or scheduled virtual alarms can then be used to trigger a relay output or to force the camera to do certain tasks (for example, to start a guard tour or to go to a preset location).

Access security
Password protection with three levels and 802.1x authentication is supported. To secure Web browser access, use HTTPS with a SSL certificate stored in the camera. The video and audio communication channels can be independently AES encrypted with 128-bit keys by installing the optional encryption site license.

Complete viewing software
There are many ways to access the camera's features: using a web browser, with the Bosch Video Management System, with the free-of-charge Bosch Video Client, with the video security mobile app, or via third-party software.

Video security App
The Bosch video security mobile App has been developed to enable Anywhere access to HD surveillance images allowing you to view live images from any location. The App is designed to give you complete control of all your cameras, from panning and tilting to zoom and focus functions. It's like taking your control room with you.
This App, together with the separately available Bosch transcoder, will allow you to fully utilize our dynamic transcoding features so you can play back images even over low-bandwidth connections.

System integration
The camera conforms to the ONVIF Profile S and Profile G specifications. This guarantees interoperability between network video products regardless of manufacturer.
Third-party integrators can easily access the internal feature set of the camera for integration into large projects. Visit the Bosch Integration Partner Program (IPP) website (ipp.boschsecurity.com) for more information.

Ease of installation and servicing
The camera has been designed for quick and easy installation, a key feature from Bosch CCTV products. The AUTODOME IP 4000 HD family is available with a choice of in-ceiling or surface mount.
In-ceiling models are safe for use in air-handling spaces.
Surface-mount models are designed for easy installation on hard ceilings or can be pendant-mounted on a wall or a pipe with the proper mounting hardware (sold separately).
Bosch offers a full complement of hardware and accessories (sold separately) for wall, corner, pipe mount, and in-ceiling applications for indoor environments, which allow the camera to be adapted easily to individual site requirements.

Dual power options
All models can be powered by a High Power-over-Ethernet (Bosch High PoE)-compliant network using a Bosch High PoE Midspan (sold separately) over a single network cable and/or a 24VAC power supply. When powered using High PoE or PoE+ (IEEE 802.3at class 4) configuration, only a single cable connection is required to power and to control the camera while also viewing images from the camera. For additional system reliability, users also have the option to connect the 24 VAC power supply to the camera while using High PoE.

Easy upgrade
Remotely upgrade the camera whenever new firmware becomes available. This ensures up-to-date products, thus protecting investment with little effort.

Unsurpassed reliability
As with all Bosch products, the camera is designed using the industry's best design process and is subjected to the most stringent testing standards such as HALT (highly accelerated life testing), which pushes the limits of products to ensure reliability throughout their lifetime.

Certifications and approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including latest versions of EN 50130-4, EN 55022:2006 inc. AL:2007, EN 61000-3-2, EN 61000-3-3
Product Safety	Complies with UL, CE, CSA, EN, and IEC Standards 60950-1 & 22
Other	RoHS C-Tick / RCM
Ingress Protection Rating/ Standard	IP65 (pendant model) IP51 (in-ceiling model)

Parts included

1	AUTODOME IP 4000 HD camera
1	Quick Installation Guide
4	MAC address labels

(additional parts TBD)

Technical specifications

AUTODOME IP 4000 HD camera

Imager	1/2.8" progressive scan CMOS
Total sensor pixels	2.48M pixels
Effective pixels	1984 (H) x 1225 (V) approx. 2.43M pixels
Lens Focal Length	12x Zoom 5.1 mm - 61.2 mm (F 1.6 - F 3.0)
Field of View (FOV)	4.6° - 51.3°
Focus	Automatic with manual override
Iris	Automatic with manual override
Digital Zoom	16x
Sensitivity / Minimum Illumination (typical)	Day Mode (Color): 0.16 Lux (AGC on) Night Mode (Black and white (monochrome)): 0.034 Lux (AGC on)
WDR	Digital Tone mapping
Noise Reduction	Intelligent Dynamic Noise Reduction
Backlight Compensation (BC)	On/Off
White Balance	Standard Auto, Sodium Vapor Auto, Basic Auto, Manual, Hold, Dominant Color Auto
Day/Night	Mechanical switchable IR filter (Auto/On/off) Monochrome

Mechanical

Pan Range	360° continuous
Tilt Range	0° - 90°
Pan/Tilt Modes	Normal: 0.1°/s - 120°/s Turbo: Pan: 0.1°/s - 160°/s; Tilt: 0.1°/s - 120°/s
Preset Speed	Pan: 160°/s Tilt: 120°/s
Pre-positions (presets)	256
Tours	Two (2) types of tours: • Recorded tours – two (2), maximum total duration 15 minutes (depending on the amount of commands sent during recording) • Preset tour – one (1) consecutive, one (1) custom

Electrical

Input Voltage	24VAC and POE+
Power Consumption	24VAC: 12W, 22W POE+: 12W

Network

Video compression	H.264 (ISO/IEC 14496-10) M-JPEG
Streaming Capability	Quad Stream (2x H.264, 1x MJPEG, 1x i-Frame only)
Resolution	1080P (1920×1080) 720P (1280×720) D1 (704×576/704×480)
Frame Rate	1080P (1 - 25/30fps) 720P (1 - 25/30fps)
Ethernet	10/100BASE-T
Protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, SNTP, SNMP (V1,MIB II), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com),SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS),LLDP, SOAP, Dropbox, CHAP, digest authentication
Connectivity	ONVIF Profiles S and G

Audio	
Compression	G.711, 8kHz sampling rate L16, 16kHz sampling rate AAC, 16kHz sampling rate
Interface	1/1 Channel In/Out

Local Storage

Local storage	Supports up to 32GB microSDHC / 64GB microSDXC card. (An SD card of Class 6 or higher is recommended for HD recording.)

Miscellaneous

Sectors / Titling	16 independent sectors with 20 characters per title
Privacy Masking	24 individually configurable privacy masks
Supported Languages	English, German, Spanish, French, Italian, Dutch, Polish, Portuguese, Russian, Japanese, Chinese (simplified)

User Connections

Power, Network	RJ45 (10/100BASE-T)
Power, Camera	24 VAC
Alarm Inputs	2
Alarm Outputs	1 relay output

Environmental

Ingress Protection Rating/ Standard	IP65 (pendant model) IP51 (in-ceiling model)
Operating Temperature	-10 ºC to +60 ºC (+14 ºF to +140 ºF)
Humidity	Less than 90% RH

Construction

Dimensions	
Pendant	Φ 170.2 mm x 162.4 mm (~6.70 in. x ~6.39 in.)
In-ceiling	Φ 198 mm x 159.3 mm (~7.80 in. x ~6.27 in.)
Weight	Less than 4.5 Kg
Construction Material	Aluminum
Standard Colors	White (RAL 9003)
Standard Finish	

Dimensional Drawings

(Pending)

Ordering information

NEZ-4112-PPCW4
AUTODOME IP 4000 HD, 12x 720p30 HD camera with indoor housing suitable for pendant installation, clear bubble
Order number **NEZ-4112-PPCW4**

NEZ-4112-PPTW4
AUTODOME IP 4000 HD, 12x 720p30 HD camera with indoor housing suitable for pendant installation, tinted bubble
Order number **NEZ-4112-PPTW4**

NEZ-4212-PPCW4
AUTODOME IP 4000 HD, 12x 1080p30 HD camera with indoor housing suitable for pendant installation, clear bubble
Order number **NEZ-4212-PPCW4**

NEZ-4212-PPTW4
AUTODOME IP 4000 HD, 12x 1080p30 HD camera with indoor housing suitable for pendant installation, tinted bubble
Order number **NEZ-4212-PPTW4**

NEZ-4212-CPCW4
AUTODOME IP 4000 HD, 12x 1080p30 HD camera with indoor housing suitable for in-ceiling installation, clear bubble
Order number **NEZ-4212-CPCW4**

Accessories

UPA-2450-50 Power Supply, 220 V, 50 Hz
Indoor power supply for camera. 220 VAC, 50 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-50**

UPA-2450-60 Power Supply, 120 V, 60 Hz
Indoor power supply for camera. 120 VAC, 60 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-60**

VEZ-A2-WW1 Wall Mount (White)
Wall mount for dome cameras (use together with appropriate dome adapter bracket); white
Order number **VEZ-A2-WW1**

VEZ-A2-PW1 Pipe Mount (White)
Pipe mount for AUTODOME cameras, white.
Order number **VEZ-A2-PW1**

NEZ-A4-BUB-PTIA
AUTODOME 4000 HD tinted bubble for pendant
Order number **NEZ-A4-BUB-PTIA**

NEZ-A4-BUB-CTIA
AUTODOME 4000 HD tinted bubble for in ceiling
Order number **NEZ-A4-BUB-CTIA**

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17546345995 | en, V1, 25. Mar 2015